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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,594	03/15/2007	Etienne Degand	339560US99PCT	7466
22850	7590	11/17/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.				
1940 DUKE STREET				
ALEXANDRIA, VA 22314				
EXAMINER				
BLACKWELL, GWENDOLYN				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
11/17/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/598,594

Applicant(s)

DEGAND ET AL.

Examiner

GWENDOLYN BLACKWELL

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-45 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 28-45 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 July 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date 7/31/09
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The declaration under 37 CFR 1.132 filed July 31, 2009 is insufficient to overcome the rejection of claims 1-27 based upon 35 USC 102 and 103 as set forth in the last Office action because: the showing is not commensurate in scope with the claims. The translated material noted in the declaration shows examples of PVB with and without retardant. The samples that fall within Applicant's claimed RHR range include a retardant. Applicant's claimed invention does not indicate that a retardant is added to the PVB.

Claim Rejections - 35 USC §§ 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

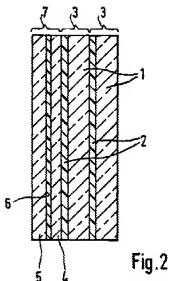
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 28-30, 32-35, and 38-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over European Patent Application Publication no. 1 044 801 A2, EP '801.

Regarding claims 28-30, 34, and 38-41

EP '801 disclose a fire protection glass as seen in Figure 2 below:



wherein layer 6 is a foil of ethylene-vinyl acetate (EVA) laminated between two glass panes. Each of the glass sheets 4 and 5 have a thickness in the range of 1-2.0 mm. Example 1 utilized glass sheets having a size of about $2 \times 3 \text{ m}^2$ ($200 \times 300 \text{ cm}^2$), (page 4, section 0028). It is also disclosed that while EVA maybe better polyvinyl butyral (PVB) is also known to be used for the same purpose, (page 4, section 0023). Although not specifically disclosed that the interlayer has the specifically claimed maximum heat release or mechanical resistance, the properties would be

considered inherent as the structural composition of the glazing panel has been met absent an objective evidentiary showing to the contrary, meeting the limitations of claim 28. See *MPEP* 2112.

In Figure 2 (as seen above) the glass sheet **1** is separated from glass sheets **4** and **5** by an intermediate fire-retardant layer **2**, (page 4, section 0020), wherein the glass sheet **1** has a thickness of 1.5 mm, (page 5, section 0028), meeting the limitations of claim 29.

The glass of Figure 2 (as seen above) is comprised of at least three substrates (**1**, **4**, and **5**) adhered to each other through the means of interlayers (**2** and **6**) to form a laminated assembly. As the structure of the laminated assembly is present along with the claimed materials to be used for each layer, it would be expected that the claimed fire rating and bullet resistance would be present absent an objective evidentiary showing to the contrary, meeting the limitations of claim 30.

The intumescent layer is comprised of an alkali silicate with a SiO_2 to Na_2O weight ratio in the range of 2.7 to 3.5, most preferably about 3.3, (page 3, section 0013), meeting the limitations of claim 34.

Claims 38-41 claim physical properties based upon the claimed structure. As the structural and compositional components of the glazing panel are disclosed in EP '801, it would be expected that the claimed physical properties would be present absent an objective evidentiary showing to the contrary, meeting the requirements of claims 38-41.

Regarding claims 32-33, 35, and 42

Example 1 utilized glass sheets having a size of about $2 \times 3 \text{ m}^2$ ($200 \times 300 \text{ cm}^2$), (column 6, section 0028). Figure 2, as shown and described above, meets the structural and compositional

limitations of claims 32-33. As the structural and compositional limitations are met, the claimed physical properties are considered inherent absent an objective showing to the contrary, meeting the limitations of claims 32-33.

The intumescent layer is comprised of an alkali silicate with a SiO_2 to Na_2O weight ratio in the range of 2.7 to 3.5, most preferably about 3.3, (page 3, section 0013), meeting the limitations of claim 35.

According to Example 1, the intumescent layer has a thickness of 0.7 mm, (page 4, section 0027), meeting the limitations of claim 42.

Claim Rejections - 35 USC § 103

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application Publication no. 1 044 801 A2, EP '801 as applied to claim 28, above in view of United States Patent no. 4,173,668, Hentzelt et al.

The limitations of claim 28 has been set forth above. EP '801 does not specifically disclose a solar control or heat reflective coating as claimed.

Hentzelt et al disclose a fire screening panel comprised of glass sheets laminated with interlayers of intumescent materials (alkali silicates) and plastic membranes, (columns 3-4, lines 48-30). In addition to the intumescent materials and plastic membranes, infrared reflective coatings can be incorporated into the structure of the fire screening panel. As noted in Figures 1-5, the infrared reflecting coating can be placed on different surfaces of the panel depending on the orientation of the panel, (column 8, lines 51-55).

EP '801 and Hentzelt et al disclose analogous inventions related to fire resistant glazings. It would have been within the skill of one in the art at the time of invention to modify the glazing

of EP '801 with the infrared coating of Hentzelt et al in order to not only provide the intumescent layers of the panel from solar degradation but to also delay the heating of the other layers of the panel thereby increasing the time during which that panel can be touched without risk of being seriously burnt, (Hentzelt, columns 6-7, lines 29-16).

7. Claims 36-37 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application Publication no. 1 044 801 A2, EP '801 as applied to claims 28-29 and 34-37 above, in view of United Kingdom Patent Application Publication no. 2 258 422 A, GB '422.

Regarding claims 36-37

The limitations of claims 28-29 and 34-37 have been set forth above. EP '801 disclose that the tumescent material is an alkali silicate and that the water content should be less than 28 wt%, (page 3, section 0013). EP '801 does not specifically disclose that the water content of the intumescent layer should be less than or equal to 22 wt%

GB '422 disclose a transparent fire-resistant panel comprised of at least one layer of intumescent material. The intumescent material is comprised of metal silicates having a total water content in the range of 20-26 wt%.

EP '801 and GB '422 are analogous inventions related to fire resistant glazings. It would have been obvious to one skilled in the art at the time of invention to modify the alkali silicate of EP '801 to have a water content of less than 22 wt% as a lower water content is "less susceptible to deterioration of the optical properties over the course of time than is a known panel in which the water content is somewhat higher", (GB '422, page 4, lines 6-14). In addition, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the

overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

Regarding claims 43-45

According to Example 1, the intumescent layer has a thickness of 0.7 mm, (page 4, section 0027).

Response to Arguments

8. Applicant's arguments filed July 31, 2009 have been fully considered but they are not persuasive with respect to the rejections under 35 USC 102 and/or 103. All other objections made in the last office action are overcome.
9. Applicant contends that (1) EP '801 fails to disclose or suggest an interlayer based on a PVB material, and (2) that Hentzelt and GB '422 fail to cure the deficiencies of EP '801.
10. With regard to contention (1), EP '801 specifically disclose that PVB is also suitable as the interlayer, (page 4, section 0023). Applicant's submitted evidence is not commensurate in scope with the claimed invention. The samples that meet the RHR limitation include components that are not a part of Applicant's claimed invention. In addition, there is no compositional disclosure comparison between the PVB as tested in the report and Applicant's claimed invention.
11. With regards to contention (2), as EP '801 does disclose the use of PVB, Hentzelt and GB '422 are still considered pertinent prior art.
12. For the reasons set forth above, new claims 28-45 are rejected.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWENDOLYN BLACKWELL whose telephone number is 571-272-5772. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GWENDOLYN BLACKWELL/
Primary Examiner, Art Unit 1794